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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,897	11/19/2001	Paavo Hyvarinen	1313/1G317US0	9178

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EXAMINER
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HECKENBERG JR, DONALD H

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 08/15/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/988,897

Applicant(s)

HYVARINEN ET AL.

Examiner

Donald Heckenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 16 is/are allowed.
- 6) ☒ Claim(s) 12, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 13 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

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was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 12, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen et al. (U.S. Pat. No. 4,640,810; previously of record) in view of Chung (U.S. Pat. No. 4,732,552; previously of record).

Laursen discloses a screen pipe (66) to be used in forming of web material in order to distribute fiber material blown into the screen pipe through a jacket of the pipe onto a wire (62) arranged to move under the pipe. The fiber material provided inside the screen pipe being made to move (using means 72), so that the movement of the fiber material has both a radial and tangential component with respect to the jacket of the screen pipe. The jacket comprises on its inner surface grooves in the pipe's axial direction (see figures 7-10). The edges of the grooves are formed on the downstream and upstream edges along the inner surface of a continuous body of the screen pipe (see figures 7-9).

Laursen does not disclose the grooves being as such that the groove that is positioned downstream with respect to the

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tangential component of the fiber flow is positioned at a more acute angle with respect to the tangential component of the fiber flow than the groove that is positioned upstream of the fiber flow.

Chung teaches an apparatus for distributing fibers in a gaseous stream, wherein the openings that the fibers must pass through are angled with respect to the fiber and gas flow, including an acute angle at a downstream end compared to the angle at the upstream end (figure 4) for eliminating plugging problems associated with other shaped openings (see column 1, line 62 - column 2, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have modified the apparatus of Laursen as such to have provided downstream was more acute and the upstream groove because this configuration eliminates plugging problems as suggested by Chung.

5. Applicant's arguments filed June 13, 2003 have been fully considered but they are not persuasive.

Applicant asserts that the previous Office Action did not label or indicate in the Chung reference which edges act in a manner like those of the claimed invention.

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The previous Office Action indicated that Chung's figure 4 disclosed the configuration of the openings through which the fibers being processed pass through. Figure 4 clearly shows the shape of the edges of the openings (17). Moreover, the description of Chung corresponding to figure 4 at column 5, lines 16-59 clearly describes the edges of the openings in relation to the fiber flow through the openings.

Applicant asserts that there is no motivation to combine the teachings of Laursen and Chung. Applicant notes that Laursen discloses edges of the apertures to be straight, and argues that Laursen does not disclose modifying the construction of the drum. Applicant further argues that Chung does not resemble the claimed screen pipe, and that Chung does not disclose or suggest the formation of a profiled groove. Instead, Applicant contends, Chung discloses metal plates and not profiled grooves, with the metal plates not serving the same purpose as the grooves of Laursen. Applicant argues that the purpose of the metal plates are formed for the purpose of deflecting larger particles back so they can be more broken down before they are ultimately ejected through the space formed between the metal plates. Thus, Applicant concludes that one of ordinary skill in the art would not look towards the Chung reference for making improvements to the Laursen design.

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The test of obviousness is not the express suggestion of the claimed invention in any or all references, but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. In re Hedges, 783 F.2d 1038, 1040, 228 USPQ 685, 687 (Fed. Cir. 1986); In re Rosselet, 347 F.2d 847, 851, 146 USPQ 183, 186 (Cust. & Pat. App. 1965). The apparatus of Laursen and Chung are not as different as Applicant asserts. Both of the apparatus are directed at processing fibers or fibrous materials onto forming wire under the apparatus (see for example, Laursen at column 1, lines 6-11 and Chung column 1, lines 6-14 and column 1, line 62 - column 2 line 10). Although Chung's apparatus is not explicitly called a "screen pipe," the apparatus functions to receive fibers and directed them through openings as part of product formation, thus acting in a manner at least closely resembling a screen pipe, if not exactly like a screen pipe.

Laursen and Chung are thus analogous art, such that one of ordinary skill in the art would be presumptively familiar with the teachings of both references. As noted in the previous Office Action, and repeated above, Chung notes a distinct advantage to the disclosed configuration of the shape of the openings through which the fibers flow. Specifically, Chung notes an improvement of the apparatus over the prior art is that

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the openings are "aligned in a direction of travel of the impact elements have having a leading surface or portion thereof which is inwardly slanted in the direction of travel of the impact elements...by designing the chamber in this manner, plugging problems are greatly reduced and throughput capacity is increased" (column 2, lines 2-10). Thus, Chung discloses when the edges of the openings are slanted in a direction of travel the impact element (as thus, slanted in a direction of travel of fibers within the chamber), plugging in the openings is reduced. This is a distinct advantage which would be noted by one of ordinary skill in the art, thereby providing motivation to modify the apparatus of Laursen.

Applicant's arguments that the metal plates in the apparatus of Chung are not the same as the grooves disclosed by Laursen do not render the combination unobvious. As discussed above, the two apparatus are directed to the same fiber product forming process and have many structural similarities. The metal plates of Chung function to create openings for the fibers to flow through, just as the grooves in the apparatus of Laursen do, and thus one of ordinary skill in the art would recognize the two structures as functionally equivalent. In other words, the metal plates of Chung form grooves for the fibers to through. Moreover, it is merely Chung's teaching of the shape of



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the edges surrounding the opening that is incorporated into the apparatus of Laursen in the obvious rejection, not the metal plates themselves.

The different function Applicant asserts for the metal plates of Chung, specifically, deflecting some of the fibrous material back into the apparatus away from the slot, is in fact part of the advantage Chung's apparatus achieves as a result of the edge structure of the plates. By deflecting some of the larger fibers back into the apparatus, Chung notes the plugging problems of the openings found in the prior art are avoided (column 3, lines 7-11). Thus, the advantage of directing the fibers back into the apparatus is the underlying function which results in the motivation for modifying the teaching of Laursen as described above. Further, this recycling function does not eliminate the other function of the openings in the metal plates in directing the fibers to the forming surface (see for example, Chung's figure 1 noting where the fibers exit the apparatus).

6. Claims 1-11 and 16 are allowed. Claims 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening

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claims. See the reasons for indicating allowable subject matter in the previous Office Action.


7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

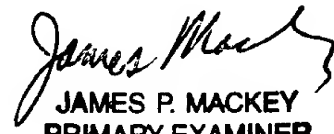
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (703) 308-6371. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. The unofficial fax phone number is (703) 305-3602.



Donald Heckenberg  
August 8, 2003



JAMES P. MACKEY  
PRIMARY EXAMINER  
8/12/03